

**ENGINEERING CHANGE NOTICE**  
**DART AEROSPACE LTD**

Date:	11.07.22	Job No.:	RD2352	ADR Yes/No:	N	ADR Date:	N/A	ECN #:	11- 615
Product No.:	D206-667 / D058-676			Created By:	CP	Approved By:	AM		
Product Name:	Crossube			Checked By:	KJ		General Manager Approval:		

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LL	
Purchasing Coord.	Y	CL	
Production Engineering Coord.	Y	EC/DD	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	Y	ED	
Customer Technical Support	Y	SW/CK	
Marketing	Y	MB	
Customer Order Processing	N		

**Reason for Change:**

Update support installation to address slipping complaints

**Documents Affected:**

- Release:
- DEO D206-667-141-C-1 - DEO D407-667-145-C-1 -DSI 9565 Rev. A
  - DEO D206-667-143-C-1 - D2891 Rev. B
  - DEO D206-667-243-C-1 - D2892 Rev. B - DEO D058-676-141-B-1
  - DEO D206-667-147-A-1 -DEO D206-667-247-A-1 -DEO D058-676-241-B-1

**PARTS MUST COMPLY**

**PREVIOUS PARTS SATISFACTORY**

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	Y			
5	Update Master Document List (MDL)	Y	KJ	new format	
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ	EXCEPT D058-676 DED's	11.07.28 \$
11	Update Product Specification Files	Y	KJ		11.07.28 \$
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		11.07.28 \$
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ		
19	Create / Update PPP's	Y	KJ		
20	Red Decals required?	Y	KJ		
21	Update Document Control Database / Laminated Dwgs	N			
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		11.07.28 \$
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		11.07.28 \$
24					

**Description / Action:**

- supports of affected tubes now installed with 3M 2216 & Proseal 890
- D2891-1 & D2892-1: finish removed, 3M 2216 now applied to bottom surface
- D206-667-101 @ CHG 004, D206-667-103 @ CHG 005, D206-667-107 @ CHG 002, D206-667-201 @ CHG 004, D206-667-203 @ CHG 004  
D206-667-207 @ CHG 002, D407-667-105 @ CHG 004
- D058-676-101 @ CHG002, D058-676-201 @ CHG002
- All affected tubes in production need to be made to this latest procedure and chg #.
- Existing crosstube stock is OK and doesn't need to be reworked.
- stock D2891-1 & D2892-1 Supports need to be reworked to remove finish & 3M 2216 added, per D2891 Rev. B & D2892 Rev. B
- Add DSI to all paperwork of all affected in-progress crosstubes & all affected stock crosstubes

everything updated  
w/ new drawings

11-08-03

*W*

ECN Verified & Complete: \_\_\_\_\_

Date: \_\_\_\_\_

**ENGINEERING CHANGE NOTICE**  
**DART AEROSPACE LTD**

MPP

Date: 11.07.22	Job No.: RD2352	ADR Yes/No: N	ADR Date: N/A	ECN #: 11- 615
Product No.: D206-667 / D058-676		Created By: CP	Approved By: JM	
Product Name: Crosstube		Checked By: [Signature]	General Manager Approval:	

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LL	
Purchasing Coord.	Y	CL	
Production Engineering Coord.	Y	EC/DD	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	Y	ED	
Customer Technical Support	Y	SW/CK	
Marketing	Y	MB	
Customer Order Processing	N		

**Reason for Change:**

Update support installation to address slipping complaints

**Documents Affected:**

**Release:**

- DEO D206-667-141-C-1 - DEO D407-667-145-C-1 -DSI 9565 Rev. A
- DEO D206-667-143-C-1 - D2891 Rev. B
- DEO D206-667-243-C-1 - D2892 Rev. B - DEO D058-676-141-B-1
- DEO D206-667-147-A-1 -DEO D206-667-247-A-1 -DEO D058-676-241-B-1

**PARTS MUST COMPLY**

**PREVIOUS PARTS SATISFACTORY**

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	Y			
5	Update Master Document List (MDL)	Y	KJ	new format	
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ	EXCEPT D058-676 DEO'S	11.07.28 \$
11	Update Product Specification Files	Y	KJ		11.07.28 \$
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		11.07.28 \$
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ		
19	Create / Update PPP's	Y	KJ		
20	Red Decals required?	Y	KJ		
21	Update Document Control Database / Laminated Dwgs	N			
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		11.07.28 \$
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		11.07.28 \$
24					

**Description / Action:**

- supports of affected tubes now installed with 3M 2216 & Proseal 890
- D2891-1 & D2892-1: finish removed, 3M 2216 now applied to bottom surface
- D206-667-101 @ CHG 004, D206-667-103 @ CHG 005, D206-667-107 @ CHG 002, D206-667-201 @ CHG 004, D206-667-203 @ CHG 004  
D206-667-207 @ CHG 002, D407-667-105 @ CHG 004
- D058-676-101 @ CHG002, D058-676-201 @ CHG002
- All affected tubes in production need to be made to this latest procedure and chg #.
- Existing crosstube stock is OK and doesn't need to be reworked.
- stock D2891-1 & D2892-1 Supports need to be reworked to remove finish & 3M 2216 added, per D2891 Rev. B & D2892 Rev. B
- Add DSI to all paperwork of all affected in-progress crosstubes & all affected stock crosstubes

ECN Verified & Complete: \_\_\_\_\_

Date: \_\_\_\_\_

**ENGINEERING CHANGE NOTICE**  
**DART AEROSPACE LTD**

MPP

Date: 11.07.22	Job No.: RD2352	ADR Yes/No: N	ADR Date: N/A	ECN #: 11- 614
Product No.: D212-664		Created By: CP	Approved By: <i>JP</i>	
Product Name: Crosstube		Checked By: <i>JF</i>	General Manager Approval:	

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LL	
Purchasing Coord.	Y	CL	
Production Engineering Coord.	Y	EC/DD	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	Y	ED	
Customer Technical Support	Y	SW/CK	
Marketing	Y	MB	
Customer Order Processing	N		

**Reason for Change:**

Update support installation to address slipping complaints

**Documents Affected:**

Release:	- DEO D212-664-141-D-2 - DEO D412-664-145-D-2 - DS1 9563 Rev. B
	- DEO D212-664-241-D-2 - D2893 Rev. C
	- DEO D212-664-147-B-1 - D2940 Rev. C
	- DEO D212-664-247-B-1

**PARTS MUST COMPLY**

**PREVIOUS PARTS SATISFACTORY**

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	Y			
5	Update Master Document List (MDL)	Y	KJ	new format	
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ		<i>11.07.28.08</i>
11	Update Product Specification Files	Y	KJ		<i>11.07.28.08</i>
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		<i>11.07.28.08</i>
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ		
19	Create / Update PPP's	Y	KJ		
20	Red Decals required?	Y	KJ		
21	Update Document Control Database / Laminated Dwgs	N			
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		<i>11.07.28.08</i>
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		<i>11.07.28.08</i>
24					

**Description / Action:**

- supports of affected tubes now installed with 3M 2216 & Proseal 890
- D2893-1 & D2940-1: finish removed, 3M 2216 now applied to bottom surface
- D212-664-101 @ CHG 005, D212-664-101B @ CHG 005, D412-664-105 @ CHG 002, D212-664-107 @ CHG 002, D212-664-107B @ CHG 002  
D212-664-201 @ CHG 005, D212-664-201B @ CHG 005, D212-664-207 @ CHG 002, D212-664-207B @ CHG 002
- Note that some of the change numbers for the "xxxB" tubes have skipped a few change numbers. This was to make them the same # as the "-xx" tubes
- All affected tubes in production need to be made to this latest procedure and chg #.
- Existing crosstube stock is OK and doesn't need to be reworked.
- stock D2893-1 & D2940-1 Supports need to be reworked to remove finish & 3M 2216 added, per D2893 Rev. D & D2940 Rev. C
- Add DSI to all paperwork of all affected in-progress crosstubes & all affected stock crosstubes

ECN Verified & Complete: \_\_\_\_\_

Date: \_\_\_\_\_

**ENGINEERING CHANGE NOTICE**  
**DART AEROSPACE LTD**

MPP

Date: 11.07.22	Job No.: RD2352	ADR Yes/No: N	ADR Date: N/A	ECN #: 11- 614
Product No.: D212-664		Created By: CP	Approved By: <i>W.P.</i>	
Product Name: Crosstube		Checked By: <i>[Signature]</i>	General Manager Approval:	

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LL	
Purchasing Coord.	Y	CL	
Production Engineering Coord.	Y	EC/DD	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	Y	ED	
Customer Technical Support	Y	SW/CK	
Marketing	Y	MB	
Customer Order Processing	N		

**Reason for Change:**

Update support installation to address slipping complaints

**Documents Affected:**

Release:	- DEO D212-664-141-D-2 - DEO D412-664-145-D-2 - DSI 9563 Rev. B
	- DEO D212-664-241-D-2 - D2893 Rev. C
	- DEO D212-664-147-B-1 - D2940 Rev. C
	- DEO D212-664-247-B-1

**PARTS MUST COMPLY**

**PREVIOUS PARTS SATISFACTORY**

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	Y			
5	Update Master Document List (MDL)	Y	KJ	new format	
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
'9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ		<i>11.07.28 S/P</i>
11	Update Product Specification Files	Y	KJ		<i>11.07.28 S/P</i>
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		<i>11.07.28 S/P</i>
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KJ		
19	Create / Update PPP's	Y	KJ		
20	Red Decals required?	Y	KJ		
21	Update Document Control Database / Laminated Dwgs	N			
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		<i>11.07.28 S/P</i>
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		<i>11.07.28 S/P</i>
24					

**Description / Action:**

- supports of affected tubes now installed with 3M 2216 & Proseal 890
- D2893-1 & D2940-1: finish removed, 3M 2216 now applied to bottom surface
- D212-664-101 @ CHG 005, D212-664-101B @ CHG 005, D412-664-105 @ CHG 002, D212-664-107 @ CHG 002, D212-664-107B @ CHG 002  
D212-664-201 @ CHG 005, D212-664-201B @ CHG 005, D212-664-207 @ CHG 002, D212-664-207B @ CHG 002
- Note that some of the change numbers for the "-xxxB" tubes have skipped a few change numbers. This was to make them the same # as the "-xx" tubes
- All affected tubes in production need to be made to this latest procedure and chg #.
- Existing crosstube stock is OK and doesn't need to be reworked.
- stock D2893-1 & D2940-1 Supports need to be reworked to remove finish & 3M 2216 added, per D2893 Rev. D & D2940 Rev. C
- Add DSI to all paperwork of all affected in-progress crosstubes & all affected stock crosstubes

ECN Verified & Complete: \_\_\_\_\_

Date: \_\_\_\_\_

## Linda Lacelle

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**From:** Kim Johnston <[kjohnston@dartaero.com](mailto:kjohnston@dartaero.com)>  
**Sent:** July 28, 2011 3:49 PM  
**To:** Eric Charbonneau; David Duval; Jean-Luc Menard; Linda Lacelle  
**Subject:** ECN11-614

FYI

D412-664-105 is now at CHG003 not CHG002 as listed on ECN11-614.

Thanks,

Kim Johnston  
Dart Aerospace Ltd.  
Engineering Clerk  
Document Control  
1270 Aberdeen Street  
Hawkesbury, Ontario, K6A 1K7  
Email: [kjohnston@dartaero.com](mailto:kjohnston@dartaero.com)  
Tel: 613-632-5200  
Fax: 613-632-9311

## Linda Lacelle

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**From:** Kim Johnston <[kjohnston@dartaero.com](mailto:kjohnston@dartaero.com)>  
**Sent:** July 28, 2011 3:07 PM  
**To:** Linda Lacelle  
**Cc:** Bill Beckett; Cathy Kerr; Chris Provencal  
**Subject:** ECN 11-614 & 11-615

Linda,

I talked with Marc and Matt about the U/R on the 058/206/212 crosstube workorders and drawings. Everyone is okay with your suggestion of adding the released drawing and ECN to the work orders, crossing out the U/R on the front of the work order with your initials and changing the CHG# in sequence 100 on the top level work orders.

The only one that is still under review is D206-667-201/-241 since we didn't receive the DEO from David. That one will still have to be signed off by Chris P. or Bill B.

Thanks,

Kim Johnston  
Dart Aerospace Ltd.  
Engineering Clerk  
Document Control  
1270 Aberdeen Street  
Hawkesbury, Ontario, K6A 1K7  
Email: [kjohnston@dartaero.com](mailto:kjohnston@dartaero.com)  
Tel: 613-632-5200  
Fax: 613-632-9311

## Where Used - Single Level

Tuesday, August 02, 2011 1:51:23 PM

Page 1 of 1

Component Item ID	Component Name	Unit of Measure			As of: 8/2/2011 1:50:41 PM		
Parent Item ID	Parent Description	Quantity Per Assembly	ECO ID	Effective Start Date	Effective Stop Date	Routing Sequence	Find Nbr
D2940-1	Support	Each					
D212-664-201	Crosstube Aft	2.0000		12/5/2009	7/20/2013	230	
D205-596-103	Crosstube Aft Extended	2.0000		12/5/2009		200	
D212-664-207	Crosstube Low Standard Aft	2.0000		12/5/2009	7/20/2013	240	
D212-664-201B	Crosstube Aft High,214	2.0000		12/5/2009		230	
D205-596-107	Crosstube Aft Extended	2.0000		12/5/2009		200	
D212-664-201MB	Crosstube Aft	2.0000		12/5/2009	7/20/2013	230	

## Where Used - Single Level

Tuesday, August 02, 2011 1:51:04 PM

Page 1 of 1

Component Item ID	Component Name	Unit of Measure	As of: 8/2/2011 1:50:41 PM			
D2893-1	2.75 Support	Each				

Parent Item ID	Parent Description	Quantity Per Assembly	ECO ID	Effective Start Date	Effective Stop Date	Routing Sequence	Find Nbr
D205-596-101	Crosstube Fwd Extended	2.0000		12/5/2009		200	
D205-596-105	Crosstube Fwd Extended	2.0000		12/5/2009		190	
D212-664-101	Crosstube Fwd	2.0000		12/5/2009	7/20/2013	220	
D212-664-101B	Crosstube Fwd High, 214	2.0000		12/5/2009		230	
D212-664-101MB	Crosstube Fwd	2.0000		12/5/2009	7/20/2013	220	
D212-664-107	Crosstube Low Standard Fwd	2.0000		12/5/2009	7/20/2013	240	
D412-664-105	Crosstube, Low Narrow Fwd, 412CF	2.0000		12/5/2009		250	
D412-664-145	Crosstube 412 Low	2.0000		12/5/2009		300	

## Where Used - Single Level

Tuesday, August 02, 2011 1:50:53 PM

Page 1 of 1

Component Item ID	Component Name	Unit of Measure	As of: 8/2/2011 1:50:41 PM			
D2892-1	Support	Each				

Parent Item ID	Parent Description	Quantity Per Assembly	ECO ID	Effective Start Date	Effective Stop Date	Routing Sequence	Find Nbr
D206-667-203BL	Crosstube Aft, Blue	2.0000		12/5/2009		230	
D206-667-207BL	Crosstube Mid Aft	2.0000		12/5/2009		230	
D206-667-203	Crosstube Aft	2.0000		12/5/2009		230	

## Where Used - Single Level

Tuesday, August 02, 2011 1:50:47 PM

Page 1 of 1

Component Item ID	Component Name	Unit of Measure			As of: 8/2/2011 1:50:41 PM		
Parent Item ID	Parent Description	Quantity Per Assembly	ECO ID	Effective Start Date	Effective Stop Date	Routing Sequence	Find Nbr
D2891-1	2.25 Support	Each					
D058-676-101	Crosstube Fwd	2.0000		12/5/2009		230	
D058-676-201	Crosstube Aft	2.0000		12/5/2009		230	
D206-667-101	Crosstube Fwd	2.0000		12/5/2009		250	
D206-667-101QS	Crosstube Fwd - Quick Silver	2.0000		12/5/2009		250	
D206-667-103	Crosstube Fwd	2.0000		12/5/2009		230	
D206-667-103BL	Crosstube Fwd, Blue	2.0000		12/5/2009		230	
D206-667-107BL	Crosstube Mid Fwd, Blue	2.0000		12/5/2009		230	
D206-667-201	Crosstube Aft	2.0000		12/5/2009		230	
D206-667-201QS	Crosstube Aft - Quick Silver	2.0000		12/5/2009		230	
D407-667-105	Crosstube Fwd	2.0000		12/5/2009		230	

D412-664-209

62039 65032  
62040 65033

D206-667-103

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71362

72493

72494

D206-667-103BL

71042

D206-667-107BL

62373

66020

D206-667-203

69579

69580

70729

70721

D206-667-203BL

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71045

D206-664-10

71749 72259

71750 72260

71747 71748

71749 72261

D212-664-101MB

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D212-664-107

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D212-664-201

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D212-664-201MB

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D407-667-105

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